

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A fuel cell system comprising:

a fuel cell; and

a hydrogen gas supply portion which supplies the fuel cell with hydrogen gas,

wherein

the hydrogen gas supply portion is provided with an odorant treatment portion which treats an odorant in a mixed gas containing the hydrogen gas and the odorant, wherein the odorant treatment portion includes a carrier that carries a porous adsorbent for adsorbing the odorant contained in the mixed gas and a catalyst for promoting decomposition of the odorant adsorbed in the porous adsorbent, and

the odorant treatment portion has a function of supplying the fuel cell with hydrogen gas by capturing the odorant in the mixed gas and a function of recovering its capturing capacity by decomposing the captured odorant.

2. (Original) The fuel cell system according to claim 1, wherein

the odorant treatment portion captures the odorant contained in the mixed gas through adsorption.

3. (Currently Amended) The fuel cell system according to claim 2, wherein

the odorant treatment portion further includes ~~an odorant removal portion containing a porous adsorbent for adsorbing the odorant contained in the mixed gas and a catalyst for promoting decomposition of the odorant adsorbed in the porous adsorbent, and a~~ decomposition support portion which decomposes the odorant adsorbed in the porous adsorbent.

4. (Currently Amended) The fuel cell system according to ~~claim 3~~claim 1,
wherein
the adsorbent contains activated carbon.

5. (Currently Amended) The fuel cell system according to ~~claim 3~~claim 1,
wherein
the adsorbent contains zeolite.

6. (Currently Amended) The fuel cell system according to ~~claim 3~~claim 1,
wherein
the catalyst contains a noble metal catalyst.

7. (Currently Amended) The fuel cell system according to claim 3, wherein
the decomposition support portion includes an oxygen gas supply portion
which supplies the odorant ~~removal~~treatment portion with oxygen gas,
the odorant treatment portion further includes a first flow path switching
portion which selectively introduces the mixed gas and the oxygen gas into the odorant
removal portion, and
the odorant ~~removal~~treatment portion oxidizes and decomposes the adsorbed
odorant by means of the oxygen gas supplied from the oxygen gas supply portion.

8. (Currently Amended) The fuel cell system according to claim 7, further
comprising:

a control portion which controls the odorant treatment portion,
wherein
the control portion controls the oxygen gas supply portion and the first flow
path switching portion to supply the odorant ~~removal~~treatment portion with the oxygen gas
during a period in which an estimated amount of the odorant adsorbed by the odorant ~~removal~~

treatment portion is equal to or larger than a predetermined amount with operation of the fuel cell system being stopped.

9. (Currently Amended) The fuel cell system according to claim 7, further comprising:

a post-decomposition gas passage through which post-decomposition gases discharged from the odorant ~~removal~~ treatment portion flows when the odorant treatment portion decomposes the adsorbed odorant ~~adsorbed by the odorant removal portion~~; and

a second flow path switching portion which introduces the hydrogen gas into the fuel cell if the hydrogen gas is discharged from the odorant ~~removal~~ treatment portion, and introduces the post-decomposition gases into the post-decomposition gas passage if the post-decomposition gases are discharged from the odorant ~~removal~~ treatment portion.

10. (Currently Amended) The fuel cell system according to claim 9, further comprising:

a control portion which controls the odorant treatment portion,

wherein

the control portion controls the oxygen gas supply portion and the first flow path switching portion to supply the odorant ~~removal~~ treatment portion with the oxygen gas, and controls the second flow path switching portion to introduce the post-decomposition gases discharged from the odorant ~~removal~~ treatment portion into the post-decomposition gas passage during a period in which an estimated amount of the odorant adsorbed by the odorant ~~removal~~ treatment portion is equal to or larger than a predetermined amount with operation of the fuel cell system being stopped.

11. (Withdrawn-Currently Amended) The fuel cell system according to claim 3, wherein

the decomposition support portion includes a heating portion which heats the odorant ~~removal~~-treatment portion, and

the odorant ~~removal~~-treatment portion reduces and decomposes the odorant adsorbed in the porous adsorbent while being heated by the heating portion, by means of hydrogen gas contained in the supplied mixed gas.

12. (Withdrawn-Currently Amended) The fuel cell system according to claim 11, wherein

the odorant treatment portion further includes a post-decomposition gas passage through which post-decomposition gases discharged from the odorant ~~removal~~-treatment portion flow during decomposition of the adsorbed odorant, and a flow path switching portion which introduces the hydrogen gas into the fuel cell if the hydrogen gas is discharged from the odorant ~~removal~~-treatment portion, and which introduces the post-decomposition gases into the post-decomposition gas passage if the post-decomposition gases are discharged from the odorant ~~removal~~-treatment portion.

13. (Withdrawn-Currently Amended) The fuel cell system according to claim 12, further comprising:

a control portion which controls the odorant treatment portion,

wherein

the control portion controls the heating portion to heat the ~~odorant~~-treatment removal portion and controls the flow path switching portion to introduce the post-decomposition gases discharged from the odorant ~~removal~~-treatment portion into the post-decomposition gas passage during a period in which an estimated amount of the odorant adsorbed by the odorant ~~removal~~-treatment portion is equal to or larger than a predetermined amount with operation of the fuel cell system being stopped.

14. (Currently Amended) A hydrogen gas supply unit which supplies a predetermined apparatus with hydrogen gas, comprising:

an odorant treatment portion which treats an odorant in a mixed gas containing hydrogen gas and the odorant, wherein the odorant treatment portion includes a carrier for treating the odorant, wherein the carrier carries a porous adsorbent for adsorbing the odorant contained in the mixed gas and a catalyst for promoting decomposition of the odorant adsorbed in the porous adsorbent,

wherein

the odorant treatment portion has a function of supplying the predetermined apparatus with hydrogen gas by capturing the odorant contained in the mixed gas and a function of recovering the capturing capacity by decomposing the captured odorant.

15. (Withdrawn-Currently Amended) A method of controlling a fuel cell system, comprising:

supplying an odorant ~~removal-treatment~~ portion with a mixed gas containing hydrogen gas and an odorant, causing the odorant ~~removal-treatment~~ portion to ~~capture-adsorb~~ the odorant contained in the mixed gas, and supplying the fuel cell with the remaining hydrogen gas, wherein the odorant treatment portion includes a carrier that carries a porous adsorbent for adsorbing the odorant contained in the mixed gas and a catalyst for promoting decomposition of the odorant adsorbed in the porous adsorbent;

determining whether or not an estimated amount of the odorant ~~captured~~ adsorbed by the odorant ~~removal-treatment~~ portion is equal to or larger than a predetermined amount; and

decomposing the odorant ~~captured-adsorbed~~ by the odorant ~~removal-treatment~~ portion if it is determined that the estimated amount of the ~~captured-adsorbed~~ odorant is equal to or larger than the predetermined amount.

16. (Withdrawn-Currently Amended) The method according to claim 15, further comprising:

introducing to the outside post-decomposition gases which are produced by decomposing the odorant in the odorant ~~removal~~-treatment portion and which are discharged from the odorant ~~removal~~-treatment portion.

17. (Withdrawn-Currently Amended) The method according to claim 15, further comprising:

promoting decomposition of the adsorbed odorant by supplying the odorant ~~removal~~-treatment portion with oxygen gas.

18. (New) The fuel cell system according to claim 1, wherein the carrier has a roll structure or a honeycomb structure.